

A. Kubelik

#9

1638

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/545,072

DATE: 11/22/2000
TIME: 11:38:08

Input Set : A:\seqlist.txt
Output Set: N:\CRF3\11222000\I545072.raw

ENTERED

RECEIVED

DEC 05 2000

TECH CENTER 1600/2900

```
4 <110> APPLICANT: Yu Lin
5      Lin Sun
6      Long V. Nguyen
7      Howard M. Goodman
9 <120> TITLE OF INVENTION: MODIFICATION OF PLANT STORAGE RESERVES
12 <130> FILE REFERENCE: 00786/368002
C--> 14 <140> CURRENT APPLICATION NUMBER: US/09/545,072
C--> 14 <141> CURRENT FILING DATE: 2000-04-07
14 <150> PRIOR APPLICATION NUMBER: 60/128,651
15 <151> PRIOR FILING DATE: 1999-04-08
17 <160> NUMBER OF SEQ ID NOS: 9
19 <170> SOFTWARE: FastSEQ for Windows Version 4.0
21 <210> SEQ ID NO: 1
22 <211> LENGTH: 1483
23 <212> TYPE: DNA
24 <213> ORGANISM: Arabidopsis thaliana
26 <400> SEQUENCE: 1
27 attgcaacca ggaagagaaa gaaatcaga gattgattta acgtgaatgg aattttgttg      60
28 tttcccaaat tctcttgaga aatagcaaaag ttcagttttg tttctctcta tctgaaagctc      120
29 aatggaagct tataagcaat gggtttgag aatagagag tatgtacaat cctttggatc      180
30 ctttgccaac ggattgacat ggtgtcttcc tgagaaqttt tctgttcag agattggacc      240
31 agaagcagta acggtctttt tgggcataat cacaacqata aatgaacaca taattgaaaa      300
32 tgcctcaaca cctcgtggcc atgttgatc ttcgggaat gateccatccc tttcttatcc      360
33 actactcacc gccatcctca aggatttgga aactgttgtg gaagtggcag ctgaacactt      420
34 ctatggagac aaaaaatgga actacattat tctcactgaa gctatgaagg ctgtcattag      480
35 gtttagcctt ttcgggaata gtgggtataa gatgcttctt caaggagggg aaacacctaa      540
36 tgaggagaaa gattctaacc aatcagagtc gcaaaataga gctggtaatt cgggtagaaa      600
37 tctcgggctt catggtcttg gaaacaaaaa tcatcataat ccatggaact tggagggacg      660
38 ggcgatgtct gctttaagtt catttggtca gaatgcaaga acaacaacat cttctacccc      720
39 cggttggtct cgaagaatcc aacatcagca agcagttata gagcctccaa tgatcaaggga      780
40 gaggcgaaga acgatgtccg agctacttac tgagaagggt gttaatggag cgttgtttgc      840
41 gattggttag gttctttaca taacgagacc gctcatttac gttcttttca tcagaaaaata      900
42 tggagtcgga tcttggtatc cttgggctat atcgtcttct gtggacacac tggggatggg      960
43 tcttcttgca aattcgaagt ggtggggaga gaaagacaaq caagtccatt tctcaggacc      1020
44 tgaaaaggat gagctgagga gacgaaaaact gatatgggca ttgtacctca tgagagatcc      1080
45 attcttccac aagtaacacaa ggcagaagct ggaaagctct caaaagaagc tggaaactaat      1140
46 tccattgacc ggtatcctca cagagaagat tgtggagctt ttggaggag ctcagtcaacg      1200
47 gtacacttac atatcgggat cgtgaggtta agcgttttac ttatggttta tatgcaacgg      1260
48 aagaatattg ccattggttg aatgcttttt tagatcatca aaggctccta cagatttctt      1320
49 agggaaatgg ttcaggcttt tgttagaaat tgtgtttatt gcaacaggta gagaacatga      1380
50 ccatacacag atgtatctga agagataagc ttctctatgt ctaagaaat ggaccgatac      1440
51 gaataaaaca agcatcatta aagattaaaa aaaaaaaaaa aaa      1483
53 <210> SEQ ID NO: 2
54 <211> LENGTH: 367
55 <212> TYPE: PRT
56 <213> ORGANISM: Arabidopsis thaliana
58 <400> SEQUENCE: 2
```

RAW SEQUENCE LISTING
 PATENT APPLICATION: US/09/545,072

DATE: 11/22/2000
 TIME: 11:38:08

Input Set : A:\seqlist.txt
 Output Set: N:\CRF3\11222000\I545072.raw

```

59 Met Glu Ala Tyr Lys Gln Trp Val Trp Arg Asn Arg Glu Tyr Val Gln
60 1 5 10 15
61 Ser Phe Gly Ser Phe Ala Asn Gly Leu Thr Trp Leu Leu Pro Glu Lys
62 20 25 30
63 Phe Ser Ala Ser Glu Ile Gly Pro Glu Ala Val Thr Ala Phe Leu Gly
64 35 40 45
65 Ile Phe Thr Thr Ile Asn Glu His Ile Ile Glu Asn Ala Pro Thr Pro
66 50 55 60
67 Arg Gly His Val Gly Ser Ser Gly Asn Asp Pro Ser Leu Ser Tyr Pro
68 65 70 75 80
69 Leu Leu Ile Ala Ile Leu Lys Asp Leu Glu Thr Val Val Glu Val Ala
70 85 90 95
71 Ala Glu His Phe Tyr Gly Asp Lys Lys Trp Asn Tyr Ile Ile Leu Thr
72 100 105 110
73 Glu Ala Met Lys Ala Val Ile Arg Leu Ala Leu Phe Arg Asn Ser Gly
74 115 120 125
75 Tyr Lys Met Leu Leu Gln Gly Gly Glu Thr Pro Asn Glu Glu Lys Asp
76 130 135 140
77 Ser Asn Gln Ser Glu Ser Gln Asn Arg Ala Gly Asn Ser Gly Arg Asn
78 145 150 155 160
79 Leu Gly Pro His Gly Leu Gly Asn Gln Asn His His Asn Pro Trp Asn
80 165 170 175
81 Leu Glu Gly Arg Ala Met Ser Ala Leu Ser Ser Phe Gly Gln Asn Ala
82 180 185 190
83 Arg Thr Thr Thr Ser Ser Thr Pro Gly Trp Ser Arg Arg Ile Gln His
84 195 200 205
85 Gln Gln Ala Val Ile Glu Pro Pro Met Ile Lys Glu Arg Arg Arg Thr
86 210 215 220
87 Met Ser Glu Leu Leu Thr Glu Lys Gly Val Asn Gly Ala Leu Phe Ala
88 225 230 235 240
89 Ile Gly Glu Val Leu Tyr Ile Thr Arg Pro Leu Ile Tyr Val Leu Phe
90 245 250 255
91 Ile Arg Lys Tyr Gly Val Arg Ser Trp Ile Pro Trp Ala Ile Ser Leu
92 260 265 270
93 Ser Val Asp Thr Leu Gly Met Gly Leu Leu Ala Asn Ser Lys Trp Trp
94 275 280 285
95 Gly Glu Lys Ser Lys Gln Val His Phe Ser Gly Pro Glu Lys Asp Glu
96 290 295 300
97 Leu Arg Arg Arg Lys Leu Ile Trp Ala Leu Tyr Leu Met Arg Asp Pro
98 305 310 315 320
99 Phe Phe Thr Lys Tyr Thr Arg Gln Lys Leu Glu Ser Ser Gln Lys Lys
100 325 330 335
101 Leu Glu Leu Ile Pro Leu Ile Gly Phe Leu Thr Glu Lys Ile Val Glu
102 340 345 350
103 Leu Leu Glu Gly Ala Gln Ser Arg Tyr Thr Tyr Ile Ser Gly Ser
104 355 360 365
106 <210> SEQ ID NO: 3
107 <211> LENGTH: 21
108 <212> TYPE: DNA

```

RECEIVED

DEC 05 2000

TECH CENTER 1000/2000

RAW SEQUENCE LISTING DATE: 11/22/2000
 PATENT APPLICATION: US/09/545,072 TIME: 11:38:08

Input Set : A:\seqlist.txt
 Output Set: N:\CRF3\11222000\I545072.raw

```

109 <213> ORGANISM: Artificial Sequence
111 <220> FEATURE:
112 <223> OTHER INFORMATION: Primer
114 <400> SEQUENCE: 3
115 atcagagatt gatttaacgt a
117 <210> SEQ ID NO: 4
118 <211> LENGTH: 21
119 <212> TYPE: DNA
120 <213> ORGANISM: Artificial Sequence
122 <220> FEATURE:
123 <223> OTHER INFORMATION: Primer
125 <400> SEQUENCE: 4
126 acgattttca attatgtgtt c
128 <210> SEQ ID NO: 5
129 <211> LENGTH: 19
130 <212> TYPE: DNA
131 <213> ORGANISM: Artificial Sequence
133 <220> FEATURE:
134 <223> OTHER INFORMATION: Primer
136 <400> SEQUENCE: 5
137 cgettggtcg gtcatttcg
139 <210> SEQ ID NO: 6
140 <211> LENGTH: 391
141 <212> TYPE: PRT
142 <213> ORGANISM: Yarrowia lipolytica
144 <400> SEQUENCE: 6
145 Met Thr Asp Lys Leu Val Lys Val Met Gln Lys Lys Lys Ser Ala Pro
146 1 5 10 15
147 Gln Thr Trp Leu Asp Ser Tyr Asp Lys Phe Leu Val Arg Asn Ala Ala
148 20 25 30
149 Ser Ile Gly Ser Ile Glu Ser Thr Leu Arg Thr Val Ser Tyr Val Leu
150 35 40 45
151 Pro Gly Arg Phe Asn Asp Val Glu Ile Ala Thr Glu Thr Leu Tyr Ala
152 50 55 60
153 Val Leu Asn Val Leu Gly Leu Tyr His Asp Thr Ile Ile Ala Arg Ala
154 65 70 75 80
155 Val Ala Ala Ser Pro Asn Ala Ala Ala Val Tyr Arg Pro Ser Pro His
156 85 90 95
157 Asn Arg Tyr Thr Asp Trp Phe Ile Lys Asn Arg Lys Gly Tyr Lys Tyr
158 100 105 110
159 Ala Ser Arg Ala Val Thr Phe Val Lys Phe Gly Glu Leu Val Ala Glu
160 115 120 125
161 Met Val Ala Lys Lys Asn Gly Gly Glu Met Ala Arg Trp Lys Cys Ile
162 130 135 140
163 Ile Gly Ile Glu Gly Ile Lys Ala Gly Leu Arg Ile Tyr Met Leu Gly
164 145 150 155 160
165 Ser Thr Leu Tyr Gln Pro Leu Cys Thr Thr Pro Tyr Pro Asp Arg Glu
166 165 170 175
167 Val Thr Gly Glu Leu Leu Glu Thr Ile Cys Arg Asp Glu Gly Glu Leu

```

RECEIVED
 DEC 05 2000
 TECH CENTER 1600/2900

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/545,072

DATE: 11/22/2000

TIME: 11:38:08

Input Set : A:\seqlist.txt

Output Set: N:\CRF3\11222000\I545072.raw

```

168      180      185      190
169 Asp Ile Glu Lys Gly Leu Met Asp Pro Gln Trp Lys Met Pro Arg Thr
170      195      200      205
171 Gly Arg Thr Ile Pro Glu Ile Ala Pro Thr Asn Val Glu Gly Tyr Leu
172      210      215      220
173 Leu Thr Lys Val Leu Arg Ser Glu Asp Val Asp Arg Pro Tyr Asn Leu
174 225      230      235      240
175 Leu Ser Arg Leu Asp Asn Trp Gly Val Val Ala Glu Leu Leu Ser Ile
176      245      250      255
177 Leu Arg Pro Leu Ile Tyr Ala Cys Leu Leu Phe Arg Gln His Val Asn
178      260      265      270
179 Lys Thr Val Pro Ala Ser Phe Lys Ser Lys Phe Pro Phe Leu Asn Ser
180      275      280      285
181 Pro Trp Ala Pro Trp Ile Ile Gly Leu Val Ile Glu Ala Leu Ser Arg
182      290      295      300
183 Lys Met Met Gly Ser Trp Leu Leu Arg Gln Arg Gln Ser Gly Lys Thr
184 305      310      315      320
185 Pro Thr Ala Leu Asp Gln Met Glu Val Lys Gly Arg Thr Asn Leu Leu
186      325      330      335
187 Gly Trp Trp Leu Phe Arg Gly Glu Phe Tyr Gln Ala Tyr Thr Arg Pro
188      340      345      350
189 Leu Leu Tyr Ser Ile Val Ala Arg Leu Glu Lys Ile Pro Gly Leu Gly
190      355      360      365
191 Leu Phe Gly Ala Leu Ile Ser Asp Tyr Leu Tyr Leu Phe Asp Arg Tyr
192      370      375      380
193 Tyr Phe Thr Ala Ser Thr Leu
194 385      390
196 <210> SEQ ID NO: 7
197 <211> LENGTH: 19
198 <212> TYPE: DNA
199 <213> ORGANISM: Artificial Sequence
201 <220> FEATURE:
202 <223> OTHER INFORMATION: Primer
204 <400> SEQUENCE: 7
205 ggcaatattc ttccgttgc
207 <210> SEQ ID NO: 8
208 <211> LENGTH: 23
209 <212> TYPE: DNA
210 <213> ORGANISM: Artificial Sequence
212 <220> FEATURE:
213 <223> OTHER INFORMATION: Primer
215 <400> SEQUENCE: 8
216 aaaaatggaa ctacattatt ctc
218 <210> SEQ ID NO: 9
219 <211> LENGTH: 22
220 <212> TYPE: DNA
221 <213> ORGANISM: Artificial Sequence
223 <220> FEATURE:
224 <223> OTHER INFORMATION: Primer

```

RECEIVED
DEC 05 2000
TECH CENTER 1600/2900

19

23

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/545,072 DATE: 11/22/2000
TIME: 11:38:08

Input Set : A:\seqlist.txt
Output Set: N:\CRF3\11222000\I545072.raw

226 <221> NAME/KEY: variation
227 <222> LOCATION: (1)...(22)
228 <223> OTHER INFORMATION: Where h is a, c, or t/u; not g.
230 <400> SEQUENCE: 9
231 ataagtaaaa cgttaacct hc

22

VERIFICATION SUMMARY
PATENT APPLICATION: US/09/545,072 DATE: 11/22/2000
TIME: 11:38:09

Input Set : A:\seqlist.txt
Output Set: N:\CRF3\11222000\I545072.raw

L:14 M:270 C: Current Application Number differs, Replaced Current Application No
L:14 M:271 C: Current Filing Date differs, Replaced Current Filing Date